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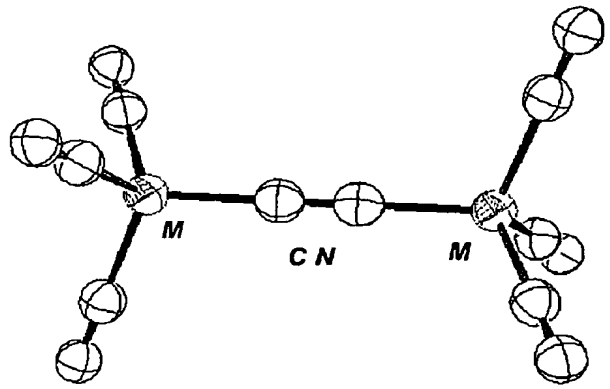
(54) Title: ANOMALOUS EXPANSION MATERIALS




(57) Abstract: A method for controlling the thermal expansion behaviour of a material comprises the step of incorporating into the material a component including one or more diatomic bridges. The or each diatomic bridge extends between two atoms in the component. The method is characterised in that the or each diatomic bridge has at least one vibrational mode that causes the two atoms on either side of the bridge to be moved together to a similar or greater extent than competing vibrational mode(s) that cause the two atoms on either side of the bridge to be moved apart. The bridge may also be polyatomic. New materials and devices comprising a plurality of such diatomic and polyatomic bridges are also defined.

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